Department of the Army
Pamphlet 700–32

Logistics

Packaging of Army Materiel

Headquarters
Department of the Army
Washington, DC
6 May 2003

UNCLASSIFIED

SUMMARY of CHANGE

DA PAM 700–32
Packaging of Army Materiel

This new Department of the Army pamphlet--

- Addresses Army packaging procedures.
- Specifies packaging requirements and levels of protection (chap 3).
- Describes programs to train packaging personnel (chap 4).
- Describes the protocol for the Army Packaging Work Group (chap 11).

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Packaging of Army Materiel

By Order of the Secretary of the Army:

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General, United States Army
Chief of Staff

Official:

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History. This publication is a new Department of the Army pamphlet.

Summary. This publication addresses Army unique packaging requirements and procedures and is to be used with AR 700-15 (NAVSUPINST 4030.280, AFJMAN 24–206, MCO 4030.330, DLAD 4145.7), Packaging of Materiel.

Applicability. This pamphlet applies to the Active Army, the Army National Guard of the United States, and the U.S. Army Reserve units that perform or supervise logistics functions.

Proponent and exception authority. The proponent of this pamphlet is the Deputy Chief of Staff, G4. The Deputy Chief of Staff, G–4, has the authority to approve exceptions to this pamphlet that are consistent with controlling law and regulation. The Deputy Chief of Staff, G–4, may delegate this approval authority, in writing, to a division chief within the proponent agency in the grade of colonel or the civilian equivalent.

Suggested improvements. Users are invited to submit comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to the G–4, ATTN: DALO–SMM, 500 Army Pentagon, Washington DC, 20310-1546.

Distribution. This publication is available in electronic media only and is intended for command levels C, D, and E for the Active Army, the Army National Guard of the United States, and the U.S. Army Reserve.

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Chapter 1
General

1–1. Purpose

This Department of the Army (DA) pamphlet (Pam) provides uniform guidelines for packaging within the U.S. Army; implements Department of Defense Directive (DODD) 4140.1 and Army Regulation (AR) 700–15; and should be used in conjunction with these documents. This pamphlet covers—

a. Army-used or Army-managed materiel.

b. Specified packaging requirements (how to develop, coordinate, and review).

c. Levels of protection (how to select the proper level).

d. Excessive packaging (how to spot and avoid it).

e. Packaging performed at Army activities.

f. Programs to evaluate and train packaging personnel.

g. Specialized packaging requirements and how to apply them.

h. Packaging data files (how to set up and maintain them).

i. Protocol for the Army Packaging Policy Work Group.

1–2. References

Required and related publications and prescribed and referenced forms are listed in appendix A.

1–3. Explanation of abbreviations and terms

a. Abbreviations and special terms used in this pamphlet are explained in the glossary.

b. North Atlantic Treaty Organization (NATO) Glossary of Packaging Terms and Definitions (English and French) is established as the primary packaging glossary for NATO. Other NATO related packaging terms and definitions are listed in Department of Defense (DOD) Joint Pub 1–02.

1–4. Regulations

a. Army packaging conforms to this DA Pam, DODD 4140.1, and AR 700–15, regardless of where performed. Materiel offered for shipment should be adequately protected; will be consolidated into the most favorable number of handling units; will be safe to ship; and be properly marked and identified per Military Standard (MIL–STD) 129, unless otherwise specified.

b. Commercial packaging should be in accordance with ASTM D3951.

1–5. Functions

a. Headquarters, Department of the Army—

(1) Provides oversight of the Army packaging program.

(2) Provides logistics policy guidance.

b. The Commander, U.S. Army Materiel Command (AMC)—

(1) Provides technical support to Headquarters (HQ) DA and major commands (MACOMs) on packaging policy issues.

(2) Validates packaging data input into the Army Central Logistics Data Base in accordance with AR 708–1 and DA PAM 708–2.

c. Commanders of major subordinate commands (MSC), secondary item control activities, and local installation acquisition activities—

(1) Assume responsibility for the design, development, and documentation of packaging for the commodities they manage, and for coordinating the packaging requirements for program managed systems with logistics managers.

(2) Ensure packaging data is input into Army Central Logistics Data Bank and maintain their currency.

(3) Include packaging requirements in all acquisition and supply transactions.

(4) Procure packaging data from commercial sources at the time of acquisition of new systems/components through contract data requirements lists (CDRL) in contracts.

(5) Ensure that depots and troop installations have the resources and facilities needed for packaging.

(6) Resource storage activities for all packaging upgrades, care-of-supplies-in-storage (COSIS), special projects, and so on, and give storage activities advance notice of large deliveries from contractors that will require upgrading.

(7) Stay apprised of new methods and materials.

(8) Consider the environmental effect of disposal of a packaging material before specifying its use. Choose materials that can be reused or recycled, when possible.

d. Commanders of shipping and storage activities—

(1) Apply the specified levels of protection when packaging materiel.

(2) Follow the applicable packaging requirements (for example, drawings, packaging management data, specifications, or standards).

(3) Use the prescribed practices and materials to consolidate and unitize shipments.

(4) Inspect materiel upon receipt, in storage, and at time of shipment. Report any packaging or shipping discrepancies, including materiel returns, attributable to the shipper (including contractors/manufacturers or vendors). Use Standard Form (SF) 364 (Supply Discrepancy Report (SDR)), or electronic media, and include all pertinent information per AR 735–11–2. Use SF 361 (Discrepancy in Shipment Report) for transportation discrepancy reports. Use SF 368 (Product Quality Deficiency Report (PQDR)), per DA PAM 738–750, for quality discrepancies.

(5) Correct reported deficiencies. Take action to prevent future discrepancies.

(6) Maintain current data files. Consult Federal Logistics (FEDLOG) for latest data. Keep all published requirements and references readily available to packaging personnel.

(7) Assess, budget, and provide any training needed at the operational level.

(8) Ensure COSIS is performed on stock. Rotate stock (on a first-in/first-out basis and ensure stock being shipped is packaged in accordance with item manager directed level of protection.

Chapter 2
Preparation, Application, Control and Evaluation of Packaging Requirements

Section I
Preparation

2–1. Developing requirements

Packaging requirements conform to AR 700–15 and this pamphlet and—

a. Specify commercial packaging when performance characteristics meet the needs of the Army.

b. Reflect methods, materials, and designs that meet the needs of military levels of protection. Those described as preferred will be used, when possible.

c. Be described in explicit terms to assure systemwide uniformity.

d. Limit the number of types, grades, styles, sizes, methods of materials, and designs. The goal is to simplify buying and stocking materials.

2–2. Prescribing requirements

Standard-sized modular units, intermediate, and exterior packs should be compatible with established pallet, containerization, and air cargo transport system sizes that are approved by the International Organization for Standardization and the American National Standards Institute. The concept of "minimum weight and cube" and "packaging design to fit the item" will be used. Commodity specifications will not repeat requirements found in separate specifications, special packaging instructions (SPI), or standards. Instead, the following will be referenced:

a. Packaging standard. Preparing activities refer to MIL–STD–2073–1 when determining packaging requirements. Requirements in coded format conform to that document.

(1) Item characteristics are identified and analyzed per MIL–STD–2073–1 in all packaging engineering studies before being referred to engineering and detailed packaging prescriptions.

(2) When preparing packaging data for Army items, activities will ensure that requirements for all levels are addressed. Requirements for lower levels may sometimes be the same as a higher level; when this occurs, so state. A packaging reference of NA indicates a particular level of protection record is not applicable.

b. SPI. Department of Defense (DD) Form 2169 (Special Packing Instruction) and DD Form 2169C (Special Packing Instruction (Continuation Sheet)) are used. Identify SPIs as follows. The first position must be an "A" (for Army), the second position must equal B, C, D, E, F, G, H, J, K, L, M, P, Q, R, S, T, U, or X. For Army-managed items, this second position must equal the first position of the materiel category code. The remaining eight positions may be alphanumeric and are provided by the service or agency. Other actions to be taken by AMC MSCs include—

(1) Maintaining an electronic copy of each prepared SPI.

(2) Electronically sending SPIs to the gaining command upon transfer of an item.

c. Specifications and standards. Packaging prescriptions in Federal and military specifications and standards conform to the format prescribed in MIL–STD–961D(1) and MIL–STD–962C. General preservation and packing requirements for a group or category of items may be prescribed in a packaging specification.

(1) SPIs or packaging requirement codes are used when detailed requirements are not included in a specification.

(2) Citing a general type packaging reference in the Army Materiel data file (AMDF) is acceptable only when providing interim item coverage.

d. Technical publications (technical bulletins (TB), technical manuals (TM), and supply bulletins). AR 25–30 will be followed when preparing these publications. Packaging requirements to be included—

(1) Conform to publish requirements for like items, when possible.

(2) Are maintained in a current state to conform to latest standardization documents (for example, standards and SPIs).

2–3. Coordinating requirements

Army activities that prepare and coordinate standardization documents and technical publications that contain packaging requirements, in detail or by reference, submit draft copies to the Chief, LOGSA PSCC, ATTN: AMXLS–AT, 11 Hap Arnold Boulevard, Tobyhanna, PA l8466–5097, for review and comments. Excluded are SPIs and coded packaging data listings.

a. Standardization documents include—

(1) Documents relevant to the packing area (to include all "packaging of" documents).

(2) Documents not relevant to the packing area but having packaging requirements that apply to Army-managed or Army-used items. (Army preparing activities or custodians will ensure that Army policy is included in commodity specifications.)

(3) Industry standards dealing with packaging machinery, methods, materials, procedures, or packaging operations.

b. Technical publications are those with new or revised packaging instructions for Army-managed items. Publications dealing with installation, operation, maintenance, and repair parts in support of Army materiel are excluded.

Section II
Application of Packaging Policy

2–4. Packaging requirements for levels of protection

AR 700–15 and this pamphlet are used when selecting levels of protection. Commercial packaging is applied per paragraph 3–2 in this publication. Instructions for packaging for the level of preservation and packing required are found in pertinent packaging documents.

2–5. Determining availability of packaging documentation

The FEDLOG is used to find current packaging requirements. If these cannot be found in the FEDLOG, the appropriate procuring command is contacted.

Section III
Control and Evaluation

2–6. Control of repackaging

a. Shipment. Materiel must not be repacked merely to comply with current or new packaging designs. Materiel is repacked if deterioration or damage has occurred or is likely to occur.

(1) Complete or partial repackaging conforms to current data. Any remarking required must conform to MIL–STD–129 and this pamphlet.

(2) Repackaging to upgrade is performed to meet the required level of protection (LOP) for the purpose and mode of transportation for each materiel release order (MRO). The packaging should not be downgraded merely to meet the required LOP. Only those parts of the pack that cannot provide the required LOP will be changed. Remark materiel per MIL–STD–129 and this pamphlet.

(3) In the event of general mobilization or a national emergency, maximum protection is provided to materiel, namely military preservation and level A packing, per paragraph 3–2*b* of this pamphlet. The fact that the MRO does not prescribe these levels does not negate the requirement for maximum protection. The only exceptions will be strictly limited to instances of known favorable shipment, handling, and storage conditions or for immediate consumption in a maintenance operation.

b. Storage. Items going into storage from maintenance are packaged to the lowest level authorized by the packaging prescription in the FEDLOG. Materiel coming out of maintenance or storage intended for shipment is packaged to the level marked on the MRO or the issue release/receipt document. If the level of protection is not identified on the MRO or the issue release/receipt document, refer to table 3 in AR 700–15.

(1) Packaging materials, as specified for an item, shall not be removed in order to save storage space.

(2) Items stored are retained in their original unit pack or equivalent.

c. Commercial packaging. Off-the-shelf packaging is used, per ASTM D–3951, supplied by a vendor when items are acquired locally or centrally for immediate use in maintenance, rebuild, repair, and utilities operations and are not meant to enter the supply distribution system.

2–7. Control of packaging requirements in shipment and storage applications

a. Special requests to change packaging. Packaging activities at AMC MSCs receive, evaluate, and approve requests for major deviations from specified packaging. Approval will be granted case by case.

b. Coordination.

(1) Proposed deviations affecting packaging with AMC MSC packaging are coordinated with the activity responsible for the item.

(2) Requests for deviations are transmitted by phone, message, or letter, depending on urgency.

(a) The AMC MSC packaging activity reviews historical data on the item and gives a formal reply to the requesting activity. If approved, the requesting activity has permission to proceed with the deviation.

(b) When deviations are required and the AMC MSC cannot be contacted (for example, during nonduty hours), the deviation may be approved locally if urgency dictates. The Army activity records the deviation and send a copy to the AMC MSC responsible for the item. The AMC MSC evaluates the deviation after the fact and contacts the installation regarding their decision.

(c) No deviation for hazardous material (HAZMAT) shipments is approved locally. In an emergency, only appropriate AMC MSC, or the Army HAZMAT point of contact at logistics support activity (LOGSA) packaging, storage, and containerization center (PSCC) can approve a deviation from packaging requirements for items classified as HAZMAT.

c. Notice of packaging deviation in shipments.

(1) Materiel from contractors should have a description of the deviation and the approving authority, date, and number noted in the acquisition receipt document or in the contract or modifications.

(2) A description of the deviation and the approving authority, including number and date the approval was granted, is written on DD Form 1348–1A (Issue Release/Receipt Document).

(3) Deviations in preparing (preserving) unboxed or uncrated vehicles and equipment are shown on two copies of DA Form 2258 (Depreservation Guide for Vehicles and Equipment). Notation should clearly and briefly describe deviations involved. The approving authority, date, and number are also shown on the form.

2–8. Analysis of packaging requirements and applications

a. Objective. The main goal is to protect the item and use the correct LOP. The aim of packaging analysis is to find corrective or improved measures where inadequate, excessive, or nonuniform requirements are apparent. This also applies when other questionable methods, materials, or designs are detected or suspected in a packaging requirement.

(1) The rules of value engineering are used as a guide in analyzing packaging design and performance. Standardizing the current method for packaging materiel and cost reduction is also be considered.

(2) Packaging analysis complements the Supply Discrepancy Report Program and does not lessen the need for reporting packaging deficiencies. The main emphasis should be on one item or group of items selected by AMC MSCs or Army activities; the selection should be the one most likely to help meet analysis goals.

b. Participation in the analysis program.

(1) Army shipping and storage activities—

(a) Provide appropriate AMC MSC with the national stock numbers and nomenclatures of Army-owned items that need packaging improvements or packaging value engineering. Requests for packaging analysis may be made by any means.

(b) Give the AMC MSC the basis for the recommended analysis.

(c) For other than Army-owned items, the LOGSA PSCC is contacted; it then contacts the owner service for guidance.

(2) The AMC MSC executes the program by—

(a) Maintaining a record of analyses performed and acknowledging requests upon receipt.

(b) Analyzing packaging requirements based on SDRs, packaging document reviews, and documented field observations.

(c) Coordinating with the other packaging activities to determine the standards and supply status of the item.

(d) Analyzing the current packaging methods or procedures to validate their adequacy, and developing, or causing to be developed, alternate packaging methods.

(e) Advising requesting activities of the action taken or planned.

(f) Providing for timely distribution of current changes in packaging methods and requirements for specific items or groups, and ensuring that revised packaging requirements are reflected in the applicable documents.

2–9. Evaluation of suggestions

a. Submission to LOGSA PSCC. A suggestion dealing with packaging, storage, transportation, or hazardous materials is sent to LOGSA PSCC for evaluation when—

(1) The suggestion has been locally adopted and is deemed to have a broader than local application.

(2) The subject of the suggestion does not pertain to any local activity, though it is considered useful to other activities.

(3) The suggestion is recommended for adoption, but approval is not within the authority of the office making the evaluation because of commodity or functional level.

b. Participation by AMC MSCs, installations, and activities.

(1) Each AMC MSC, installation, and activity—

(a) Provides a supporting evaluation per AR 672–20.

(b) Provides the LOGSA PSCC an estimate of tangible and intangible benefits to be derived locally, if adopted.

(c) Provides comments and recommendations to the LOGSA PSCC on suggestions initiated elsewhere, when requested.

(d) Evaluates suggestions received from the LOGSA PSCC covering single stock numbered items or single commodities. Replies directly to the activity requesting evaluation with an information copy to the LOGSA PSCC.

(2) The LOGSA PSCC—

(a) Receives and evaluates suggestions based on data on hand or obtained through DOD-wide coordination.

(b) Forwards suggestions covering a single stock numbered item or single commodity to the applicable MSC for evaluation and direct reply to the activity requesting evaluation.

Section IV
Packaging Data Files

2–10. Makeup of packaging data files

a. Packaging data file content. The packaging data file available for use in retrieving packaging requirements for storage and shipment is FEDLOG, which contains packaging data elements extracted from the packaging segment of the AMDF. LOGSA is the Army activity that is responsible for data integrity per AR 708–1. LOGSA edits and validates Army data transferred to FEDLOG.

b. Use of packaging data files.

(1) The packaging segment of the AMDF is used to transmit packaging data by computer record to FEDLOG.

(2) The AMDF packaging file contains packaging logistics information that may be used to help determine the packaging requirements and materiels required for packaging or repackaging efforts may be used.

(3) When researching packaging data, consult the Federal Logistics Information System Packaging Segment, as all Army supply items are listed in this file. If an SPI is referenced, contact the AMC MSC for this information.

2–11. Development of packaging data by Army installations and activities

a. Army installations are authorized to develop packaging data for an item only when the data are not available in the FEDLOG or from any other source and urgency dictates that the AMC MSC cannot be contacted. The appropriate AMC MSC will be informed of this action the next business day and a detailed description will be provided. A record will be kept at the installation and AMC MSC in the event that the packaging is questioned. For non-Army-managed items, the LOGSA PSCC will be contacted and this activity will coordinate and inform the other service/agency.

b. When weight and cube data for a given item are not available in either the Depot Stock Number Master Data Record or the Army Master Data File Retrieval Microform System file, the data are developed locally (except for items having acquisition advice codes L, N, T, V, W, and Y). It is then submitted to the file originator at the AMC MSC for review. The managing activity reviews weight and cube data. Data accepted for use are input to the packaging segment of the AMDF.

Section V
Excessive Packaging

2–12. Identifying excessive packaging

Some examples of excessive packaging include—

a. Using a higher level of protection than is required.

b. Using more costly materials or methods when others would provide ample protection at a lower cost.

c. Waterproofing (as with case liners) of items already waterproofed by the method of preservation.

d. Shipping small individual containers to a single destination rather than using a unitized load.

2–13. Packaging not considered to be excessive

Certain conditions that may appear to be excessive packaging are acceptable when other factors are considered in proper perspective, to include—

a. Use of available materials and containers that exceed requirements when too much delay or high acquisition costs would result from buying specified materials.

b. Shipment of in-stock items having a higher level of protection than that required after all locations have been checked for stock at the required LOP.

c. Adding nonreinforcing skids to heavy boxes, which increase the container's weight and cube but reduce handling costs through better use of forklifts, slings, and other handling aids.

d. Special protection required to prevent theft of items that are classified, hazardous, or sensitive.

e. Use of materials and containers that exceed protective requirements when no additional costs are incurred and specified weight and dimensions are not exceeded.

f. Ammunition, explosives, and other hazardous materials, when prepared per approved drawings and specifications.

2–14. Determining requirements and application by packaging operations

a. Excessive packaging is avoided through—

(1) Strict adherence to packaging specifications.

(2) Consideration of such factors as storage, methods of shipment, ultimate destination, immediacy of use, and end use of the item.

b. Specifications, packaging instructions, or acquisition documents require using the lowest cost methods and materials to meet the level of protection required by AR 700–15. Packaging requirements are stated so as to preclude excessive packaging.

c. Packaging activities adhere to packaging specifications and other factors to avoid excess packaging and resulting increase of cube. Recommended revisions or corrections include—

(1) When specifications are involved, a DD Form 1426 (Standardization Document Improvement Proposal) is completed and submitted to addressee shown on the back of the form.

(2) When acquisition documents are involved, a SF 364 is prepared and submitted per AR 735–11–2.

2–15. Reporting of excessive packaging

Receivers of military supplies and equipment complete an SF 364 on excessive packaging in enough detail to show how the item is overpackaged. Recommendations for correction are included.

Chapter 3
Design and Performance Criteria for Preservation and Packing Levels of Protection, Prescription, and Application

3–1. Criteria for developing preservation and packing requirements

Any development of preservation and packing requirements for LOP applications conforms to the design criteria specified in AR 700–15 (chap 3) and herein. Specific levels of preservation and pack are developed utilizing the design criteria identified in MIL–STD–2073–1. Just as military packaging practices are a result of testing of designs, commercial packaging practices are also subject to their own developmental processes. The end result for both must be package performance. Packaging data development is required to maintain the item throughout its life cycle and will be designed at the time the new part is determined to be a DOD store, stock, and issue item within the military supply distribution system.

a. The packaging design should be obtained from the prime contractor and the data shall be approved and maintained by the responsible AMC MSC.

b. A Government facility is used onlyto develop packaging data when:

(1) The commander approves a request.

(2) It is determined to be cost effective and the facility has the personnel and equipment to design, fabricate, and test the package.

(3) Commercial sources cannot provide the services within a required timeframe.

3–2. Commercial packaging

a. Commercial packaging is acceptable for any level of protection when the technical design of the package meets all conditions of the level of protection specified and when it is more cost effective.

b. Commercial packaging must meet the requirements of ASTM D 3951 or the specific industry packaging standard for the commodity being purchased. When a military level of protection is specified, the commercial packaging must provide the same level of protection against physical and environmental damage as military packaging. Marking is per MIL–STD–129, or as specified in the contract order.

c. Use of commercial packaging is contingent upon its ability to provide adequate protection to the item, with no increase in packaging charges, size, weight, or delay in delivery.

(1) Bulk practices used in interplant and intraplant movements or shipments to jobbers are not acceptable unless they are the usual trade practices for individual commodities such as coal, bulk petroleum, and fresh produce.

(2) The packaging details are incorporated into standardization and acquisition documents when applicable. Specific standards of industries are used when appropriate.

Chapter 4
Training

4–1. General

a. Personnel, who develop packaging data apply data requirements, inspect/certify completed packages or are involved in other packaging operations should be trained in military packaging techniques and methods. Organizational management budget and provide for this training.

b. The courses at the School of Military Packaging Technology (SMPT), Aberdeen Proving Ground, MD, are the DOD prime source of military packaging training. These courses, which cover all aspects of military packaging, are announced in DA PAM 351–4 and DODD 5010.16.

4–2. Local packaging training

a. The installation commander is responsible for assessing any packaging training needs. The installation commander initiates funding requests through their chain of command. The MACOM ensures that funding is available.

b. Career development of individuals working in the packaging fields is essential. MACOMs, in conjunction with TRADOC, establishes developmental training programs for individuals based on command missions, and functions.

c. Local packaging training programs are needed to develop and maintain packaging capability within an installation. These programs shall be developed to provide specialized training that supplements the training taught by SMPT.

d. Local training programs should include, but not be limited to:

(1) Packaging and unitization operations.

(2) Installation goals and policies for preparing materiel for shipment and storage.

(3) Economical, operational, and velocity management effects on ways to buy, distribute, transport, store, and use packaging materials.

e. Installation operations should have accredited off-campus instructors certified by SMPT.

f. Installations that cannot fund resident or onsite training from SMPT should encourage the utilization of the SMPT correspondence course program.

Chapter 5
Application of Packaging Requirements for Shipment and Storage

Section I
General

5–1. Overview

a. This chapter defines the actions for which an activity prepares materiel, which includes all classes of supply, for shipment and storage.

b. This chapter addresses—

(1) Selection and application of the correct level of protection.

(2) Documentation and marking requirements.

(3) Palletization and unitization.

(4) Preparing Army prepositioned stock for storage.

(5) Single stock fund.

(6) Retrograde.

5–2. Selection of the correct level of protection

a. Item managers determine the correct level of protection for all materiel movements. The level of protection is determined using the criteria contained in AR 700–15. The level of protection is identified on the MRO. Special packaging not covered by the requirements contained in the FEDLOG will be communicated by the item manager via phone, fax, or email.

b. Shipping activities will comply with the item manager's selection of the level of protection and follow the preservation and packing MIL–STD–2073–1 codes, special packaging instruction, packaging data sheets, specification/standards, and/or vehicle processing sheets.

Section II
Marking

5–3. Marking unpacked items, unit and intermediate packs, exterior containers, and unitized loads

a. Markings, applications, placements, bar codes, and materials for all classes of supply, to include vehicles, hazardous materials, ammunition/explosives, sensitive/pilferable, multipacks, and unitized loads, must comply with MIL–STD–129.

b. In addition to the requirements contained in MIL–STD–129, aircraft are marked per applicable preparation for shipment technical manual.

c. CONUS and OCONUS address markings should comply with the documents below, as applicable:

(1) MIL–STD–129.

(2) The Military Shipment Label, which should be completed as recommended in DODD 4500.9, part II.

(3) Shipping orders.

d. Documentation complies with AR 725–50.

5–4. Distinctive markings

a. Distinctive markings for all levels not provided for in MIL–STD–129 (or in its references) or in this pamphlet are not used unless approved.

b. Requests for changes or use of distinctive markings should be submitted to Chief, LOGSA Packaging, Storage, and Containerization Center, ATTN: AMXLS–AT, 11 Hap Arnold Boulevard, Tobyhanna, PA l8466–5097.

c. Markings approved are referred for later inclusion in MIL–STD–129 or this pamphlet.

d. Requests for approval of markings not in MIL–STD–129 or this pamphlet include the following:

(1) Sample of the desired marking.

(2) Instructions for use and applications.

(3) Proof of need and conclusive evidence that existing markings are not suitable or adequate.

e. Distinctive markings, including labels, are applied only when specified to expedite segregation and distribution of supplies. These markings are used to identify special projects, project or product manager equipment, and special equipment. Markings are applied by means of labels, stenciling, painting, or any combination of these.

Section III
Unitization, Palletization, and Consolidation

5–5. Unitization

All shippers of military supplies will adhere to the following utilization tasks:

a. Unitizing materiel at shipment origin or at the earliest point thereafter.

b. Planning shipment unitization at the source to avoid unitizing at terminals or other intermediate points.

c. Shipping materiel in unitized loads as a part of acquisition actions whenever the quantity involved can be unitized. Unitize ammunition and explosives according to approved drawings that show the technique designed for the specified items.

d. Utilizing shipment planning per DODD 4500.9 and AR 725–50 to ensure greatest unitization of materiel for movement.

e. Unitizing materiel when the load is sent to a single break-bulk point (BBP) or central receiving point (CRP) for distribution to supply support activities, to include—

(1) Materiel with different project codes.

(2) Unitization of project and nonproject materiel.

f. Assuring that technical requirements for unit loads on pallets are compatible with levels of protection prescribed for the shipment. Levels of protection for materiel on pallets in unit loads or unitized in consolidation boxes may be level B packaging when these levels will not compromise item protection when removed from an intermodal container.

g. Ensuring three drums per pallet when shipping materiel in 55-gallon drums. Drums should be on standard 40- by 48-inch (in) four-way entry pallets and be secured to the pallet by shrink or stretch film.

(1) When shrink or stretch film is not available or the commodity is not compatible with shrink film processes (for example, petroleum, oils, and lubricants or explosives), drums should be securing with the appropriate metal strapping per ASTM D–3953, applied girthwise.

(2) Nonmetallic strapping should be used, per ASTM D–3950 (use with ASTM D–4675) as an alternate, when available, subject to the criteria of MIL–HDBK–774. If fewer than three drums are shipped, they need not be placed on a pallet.

h. Ensuring that unitizing will be compatible with the characteristics of the commodities and the need for protection during handling, storage, and movement. The goal is to achieve minimum weight and cube. Materiel designed to be

handled, stored, and shipped, as a complete unit need not be further unitized when loaded directly on a skidded platform, load base, or pallet.

i. Unitizing loose cargo for reshipment at terminals and freight consolidation (or other assembly points), whenever compatibility of materiel and overall economy will result.

j. Marking unitized loads so that the items within the load can be identified without disassembly of the load.

k. Unitizing pneumatic tires, per MIL–DTL–4M.

(1) When unitized, the shrink fil, or stretch film bonding method will be used instead of metallic strapping. Pallets will not be used to unitize tires.Tires with different national stock numbers are unitized for shipment in the same bundle if—

(a) There is not enough of one national stock number available to form a bundle.

(b) The outside dimension of any of the tires is between 14 and 48 in.

(c) The tires are individually identified within the bundle.

(d) The tires are all for the same final consignee and all have the same priority designator.

(2) Shrink film for level A should be type V (ultrainhibited (weatherable)), A–A–3174, 6-mil thickness.

(3) Tube and tubeless tires having an outside dimension of 48 in or over are shipped loose.

5–6. Palletization

a. Palletization should be accomplished in accordance with MIL–HDBK–774 and this document. Use of palletized unit loads must meet these criteria:

(1) The amount of materiel to be loaded on a pallet will—

(a) Exceed a total of 250 pounds (excluding the pallet).

(b) Exceed a volume of 20 cubic feet.

(c) Compactly occupy at least 80 percent of the pallet's load-bearing surface.

(2) The maximum weight limit for palletized unit loads is 3,000 pounds.

(3) Minimum overhang is permitted beyond the perimeter of a pallet deck when using expendable-type pallets to unitize fiberboard containers.

b. Commodity managers prescribe palletization requirements in specifications, standards, and SPIs for levels of protection, when basic protection methods are required for final handling, storage, or issue of the item. Items to be palletize must not be specified in place of—

(1) Unit protection.

(2) Intermediate packs.

(3) Exterior containers.

c. Shipping activities palletize unit loads per MIL–HDBK–774, as follows:

(1) *Shrink film.* Shrink film bonding, to include multipacks, is appropriate for all commodities except ammunition, nuclear explosives, petroleum, oils, and lubricants, and other flammable materials. Polyethylene shrink wrap for use in pallet-load bonding shall conform to type IV, class 3, grade A, finish 1, of A–A–3174. Use thermoplastic films of 6-mil polyethylene for loads up to 2,000 pounds. Use a polyethylene film of 8-mil from 2,000 to 3,000 pounds.

(2) *Markings.* Address markings are inserted face out under the shrink film bag before shrinking or are attached to the outside of the bag after shrinking with ASTM D–5486 tape (clear) applied over the entire address label.

(3) *Stretch film.* Stretch wrap bonding, to include multipacks, is used for all commodities and types of palletized loads shipped in CONUS or when shipped containerized. Stretch wrap shall be clear, extruded polyethylene, 0.9-mil minimum thickness or ethylene vinyl acetate, 0.8 mil minimum thickness. Multiwraps of polyethylene should add up to a minimum of 2.7 mils, on loads up to 1,000 pounds, 4.5 mils on loads up to 2,000 pounds, and 5.6 mils on loads up to 3,000 pounds. A sheet of weather-resistant fiberboard or plastic film, the same size as the perimeter of the load, is placed on top of the load prior to wrapping to provide additional protection. Pressure- sensitive labels containing identification and contract data markings and the address are placed on the outermost layer of wrap to enhance handling and shipping of the palletized load. A marking board positioned on the pallet before the last layer of wrap is applied is authorized on the basis of local operations and capabilities. Guidance on the use of stretch film packaging can be found in ASTM D–5458 and ASTM D–5459.

(4) *Strapping.* Use of strapping is per MIL–HDBK–774. Secondary straps on pallets without strapping slots in the stringers are laid flat on the pallet and the load assembled and strapped before the load is bonded to the pallet. Primary and horizontal straps are applied per MIL–HDBK–774.

d. When pallets are used to contain loose items for protection and handling during shipment and storage under level A or B pack conditions, engineered unit load requirements are prescribed for the item as follows:

(1) A detailed description of the unit load is provided.

(2) Applicable requirements (for example, specifications, standards, or data sheets) are referenced.

(3) A standard 40- by 48-in (1,000- by 1,2000-millimeters (mm)), four-way entry, wing-type, softwood pallet of type MH1b–2000, type IV, size 2, NN–P–71, is used to build palletized unit loads (except as specified for intermodal container or air shipment).

(4) Nonstandard pallet sizes are used for general supplies only if it would be impractical to use that in (3) above.

e. Palletized unit load requirements are stated by reference to load types in MIL–HDBK–774, when engineered unit loads are not required.

(1) Requirements for items and containers that require stacking and handling aids because of quantity, design, weight, or protection needs are prescribed.

(2) Weight and overall dimensional limits of palletized unit loads should conform to MIL–HDBK–774, except where prohibited by item or container characteristics. This is also true in separate directives for a specific use, commodity, geographical area, or mode of shipment.

5–7. Consolidation

a. Use consolidation containers to multipack mixed national stock numbers into one outside shipping container to ease handling during shipment.

(1) When packing multiple quantities of the same item in consolidation containers, they should be positioned and secured in a manner that will permit ready identification upon opening. As an alternate, they are consolidated (by bagging, bundling, tying, wrapping, or packing in cartons). The item and quantity are identified before being placed in the container.

(2) Heavy items are centered on the bottom of the container. Light, critical items and transportation priorities are placed on top. All voids are filled with cushioning material.

(3) Documentation per MIL–STD–129 is included.

b. Consolidation containers are not used for individual outside containers for a single line item. This does not bar their use in specifications, standards, or SPIs for a broad group of items where consolidation is feasible and likely to occur in shipments from contractors or Army activities.

c. Consolidation containers protect the contents during shipment to the final destination. The type of consolidation containers used is based on the specified levels of protection. Standard consolidation containers made expressly for modular loading in containerization media are used.

d. Dimensions for consolidation containers for overseas shipment are compatible with containerization media to permit greatest use of the available space. Length of individual consolidation containers should not exceed 86 in.

e. Consolidation containers on 40- by 48-in (1,000- by 1,200-mm) four-way entry pallets must not exceed the maximum length and width permitted by MIL–HDBK–774 for conventional shipment. When shipped overseas within containerization media, consolidation containers will not exceed the dimensions of the pallet.

f. Containerized shipments of ammunition and military explosives are prepared per specifically approved drawings, permits, and procedures for the items involved and as directed by the applicable commodity command.

Section IV
Army Prepositioned Stock (APS)

5–8. General

Army prepositioned stock (APS) materiel will be prepared for storage in accordance with TM 38–470.

5–9. Materiel and equipment (nonself-propelled)

a. Preservation requirements for secondary items should follow AR 700–15 (table 3) and are developed in accordance with MIL–STD–2073–1.

b. Level A packing for items is provided if not consolidated in intermodal containers or other intermodel containers. Level B packing can be used if materiel will be consolidated and deployed in these consolidation containers.

c. Commercial packaging may be used only when it will meet or exceed the requirements in paragraphs *a* and *b* above.

d. Item managers ensure that movements of the materiel to APS sites are packaged in accordance with paragraphs *a* and *b* above.

e. Items repaired or unpackaged for maintenance or inspection at APS sites will be repackaged at that site in accordance with item manager packaging requirements.

f. All Supply Class V is packaged in accordance with appropriate packaging drawings and palletization procedures.

5–10. Self-propelled equipment

a. Item managers develop preservation requirements that will: minimize the cost of labor and materials to store the equipment; allow for rapid deployment; and provide adequate protection between maintenance cycles.

b. APS site personnel ensure that self-propelled equipment is stored and maintained in accordance with TM 38–470 requirements.

5–11. Single stock fund sites

Single stock fund sites will package materiel in accordance with AR 700–15 and this pamphlet, utilizing velocity management practices.

a. Materiel that is repaired as part of the national program is packaged in accordance with the repair authorization approved by the applicable National Inventory Control Point (NICP). If an item is repaired for the national inventory, the lowest level of protection contained in the packaging segment of the FEDLOG is applied.

b. Materiel that has been repaired for local, regional, or repair and return program shipments for immediate use is packaged to prevent deterioration of the item to a lower condition code. Local design of packaging for these shipments is performed if determined to be less costly than existing military requirements or if no existing military requirements are available. A requirement for an item's reusable container and its closure instructions shall not be waived.

c. Developers of multiuse containers used to facilitate handling or consolidation of specific items for off-post shipment are required to submit design documentation and packing instructions to the single stock fund onsite representative. The single stock fund onsite representative coordinates, as appropriate, with LOGSA PSCC for review and approval with the appropriate NICP packaging office.

d. Materiel in storage is shipped in original unopened depot or vendor package.

(1) If materiel has been removed from original package, the lowest level of protection contained in the packaging segment of FEDLOG applies for CONUS shipments and on-post storage. Movement of materiel to an on-post activity for immediate use is protected to prevent deterioration of the item.

(2) For OCONUS shipments, where the original package has been compromised, military preservation and level A pack applies in accordance with the requirements contained in FEDLOG. Materiel under 25 pounds and under 1 cubic foot can have a level B pack.

(3) If packaging data are not available for an item, the installation single stock fund representative, appropriate NICP, or LOGSA PSCC is contacted for instructions.

(4) If an item's original vendor or depot packaging must be upgraded at the time of receipt or shipment, the receiver or shipper can request reimbursement from the appropriate NICP on DD Form 1225 (Storage Quality Control Report), in accordance with AR 740–3. Required delivery date requirements will not be compromised by this process.

e. Unserviceable materiel shipped for repair is processed to prevent further deterioration. Reusable containers and closure instructions will not be waived.

f. Reusable containers accompany the item throughout its life cycle, unless directed otherwise by the item manager.

g. Items that are or consist of hazardous materials and regulated for shipment by the Department of Transportation are prepared for shipment in accordance with 49 CFR 100–180 and/or AFJ Man 24–204/TM 38–250. Additionally, shipments of hazardous materials must comply with DODD 4500.9.

h. All shipments, as a minimum, will be marked in accordance with MIL–STD–129. Special markings required by the NICP or the National Maintainance Office will be applied, as required.

i. The installation commander will appoint a primary source of packaging support for the units assigned to the installation.

Section V
Retrograde and Excess Materiel

5–12. General

Serviceable and unserviceable returns are protected in accordance with AR 700–15 and this document. All materiel is properly identified in accordance with MIL–STD–129.

5–13. Protecting retrograde materiel

a. Retrograde materiel is returned in original reusable container, if applicable. Failure to return the reusable container could result in the loss of credit.

b. Unserviceable retrograde materiel is protected to prevent further deterioration during storage and shipment to the next maintenance point.

c. Protection is applied to materiel awaiting disposition instructions.

d. Reusable containers will not be separated from items unless directed by the SOS.

5–14. Excess materiel

Excess materiel is returned in original depot or vendor packaging. If removed from this packaging, the shipping activity packages the materiel in accordance with item manager packaging instructions.

Chapter 6
Preparing Materiel for Domestic Air Shipment

6–1. General

a. These procedures apply to all Army materiel (except security assistance shipments or hazardous cargo) shipped by air and originating at CONUS activities.

b. Shipments of air-eligible materiel are consolidated whenever practical within the limits of DOD 4500.32–R and this chapter.

6–2. Preparing shipment

a. Prepare materiel for shipment per this section.

b. Materiel destined for one consignee is consolidated on 40- by 48-in (1,000- by 1,200-mm) pallets or in consolidation containers when possible before shipping to a consolidation/containerization point. Direct-to-user shipments may be made on 463L pallets if the shipment is to one consignee and can be made within the timeframes in AR 725–50.

c. Assorted stock numbers of small parts will be consolidated as multipacks.

d. Standard 40- by 48-inch (1,000– by 1,200–mm) palletized unit loads, consolidation containers, random size exterior containers, and loose items are palletized on 463L pallets.

(1) If there is not enough cargo available to fill (gross or cube) a 463L pallet (5,000 to 10,000 pounds or 116 to 485 cubic ft), the shipment moves as a unit load on standard 40- by 48-in (1,000- by 1,200-mm) pallets or as loose cargo to the CCP.

(2) Consolidation containers and random-size exterior containers are shipped to a CCP only when the quantity is insufficient to palletize on a 463L pallet or on a 40- by 48-in (1,000- by 1,200-mm) pallet or both. It should be noted that the maximum weight is 5,000 pounds for the half-size 463L pallet and 10,000 pounds for the full-size 463L pallet. Because the maximum weight for the standard 40- by 48-inch (1,000- by 1,200-mm) MH1b-2000 pallet is 3,000 pounds, it must be ensured that the 463L pallet is not overloaded.

6–3. Unit protection

To provide adequate protection without adding unnecessary weight, it is essential that shipping activities adhere to the guidelines below when preparing materiel for air shipment.

a. The cost for military air shipments is normally based on tonnage. Therefore,overpacking and using heavy packing materials such as wood pallets, wood boxes, and metal shipping containers, when not required, add to the cost.

b. Materiel for air shipments should be repacked when tare weight and cube can be reduced; the required level of protection and security of the materiel must remain intact. Ensure that performance of special engineered container design is not affected.

Chapter 7
Small-Parcel Shipments

7–1. Preservation and packing

a. A small parcel generally is defined as a pack that meets the size and weight limits and other requirements set by the carrier, (for example, U.S. Postal Service (USPS) or commercial parcel service). The USPS manual is used to determine—

(1) Which shipments can go by parcel post.

(2) The limits placed on these shipments.

b. Level B or commercial packaging is applied to parcel post shipments. The packaging applied does not compromise item protection and ensures acceptance and safe delivery by the USPS or small-parcel carrier.

7–2. Consolidation of parcel post shipments to the same consignee

a. Parcel post shipments are consolidated at the source, when possible. Activities with automated systems consolidate by means of machine-generated shipment planning worksheets.

b. Activities that do not operate under mechanized procedures consolidate shipments manually to one consignee.

7–3. Exterior containers

a. Shrink film may be used to pack and unitize small-parcel shipments. The system is used whenever the item size permits.

(1) Items to be packed may be placed on trays (A–A–1253) or locally fabricated fiberboard sheets.

(2) In some cases, because of item size or configuration, a tray or sheet may not be required.

b. Items not packed per a above are packed as follows:

(1) *CONUS shipments.* Containers conform to section C010.3, Domestic Mail Manual (DMM) Issue 57. Closure of fiberboard containers, except for registered parcel post, is done in a way to ensure acceptance and safe delivery by the USPS or commercial small-parcel carrier.

(2) *OCONUS shipments.*

(a) Containers for overseas parcel post shipments are class weather-resistant of ASTM D–1974 (use with ASTM D–5118/D–5118M). Reinforced or cushioned paper shipping sacks and cotton mailing bags may be used when they meet the needs of the shipment.

(b) Fiberboard boxes are closed and reinforced following ASTM D–1974. Staples are not used when a barrier bag is used as an element of the method of preservation. If staples are present, a strip of tape is applied over any staples used in the manufacturer joint.

7–4. Registered and numbered insured parcel post

Completely seal fiberboard containers used for registered shipments with type III, class 2 (nonstrippable) A–A 1492 or A–A 1671 tape. The USPS does not accept pressure-sensitive tapes for sealing registered packages.

7–5. Required mail classification markings

All official mailings (except letter-size first-class mail) are marked below the postal indicia with the designated postal service (mail classification) with a rubber stamp or by hand if a rubber stamp is unavailable. Any official mailing without the proper mail classification markings will be returned to sender.

7–6. Use of commercial small-parcel carriers

a. In addition to parcel post, Army activities may ship parcels by commercial small-parcel carrier (for example, United Parcel Service, Federal Express, and so on.) when the service is available and economical.

b. Generally, any small parcel acceptable to USPS will conform to the requirements of commercial small-parcel carriers, although weight limits may vary.

7–7. Fast-pack containers

a. As often as possible, PPP–B–1672 containers are used (fast packs) for shipping by parcel post or commercial small-parcel service—

(1) For items under repair and return programs.

(2) When a container capable of withstanding multiple uses is required.

(3) For items susceptible to damage in shipment (for example, delicate or fragile electronics items). Any item of a size compatible with the containers may be shipped in a fast pack.

b. Fast packs are identified as reusable containers. Each activity should reuse the containers, especially for return of reparables, and not return empty containers to shippers.

7–8. Small-parcel shrink film system

a. The system is designed to pack and unitize packages. The unit automatically feeds, wraps, and discharges packages weighing from 1 to 70 pounds.

(1) This system does not negate the need for required preserving or cushioning.

(2) Packages made with the system are acceptable by USPS and commercial small-parcel carriers.

(3) Appearance of packages (for example, excess film formed at sides or ends, openings in the film (from inadequate bonding)) is not reason for rejecting a package.

b. Address labels, documentation, mail classification markings, and any other required markings are placed beneath the film on top of the items before they are moved through the automatic wrapper. Place the address label so that it is easily read in the center and parallel with the length of the pack. There are three exceptions:

(1) Under the foreign military sales program, DD Form 1348–1A is placed in an envelope and attached it to the outside of the pack per MIL–STD–129; or placed on top of the items before they go through the sleeve wrapper. Care must be taken to ensure that the document is clearly visible and positioned for easy removal.

(2) For materiel requiring PS Form 3811 (Domestic Return Receipt), attach the form to the outside of the pack using pressure-sentitive tape.

(3) For Direct Support System shipments, the document identifier code "D6S" (materiel receipt acknowledgement) card and the document identifier code "BBC" (consolidated shipment status) card is placed in an envelope and attached to the outside of the pack, or placed beneath the film in a way to prevent damage to the cards and permit easy removal. Note that shrink film is not used on photographic film and other items sensitive to heat transfer.

Chapter 8
Shipment and Storage of Guided Missile and Large Rocket Systems, Ammunition, Explosives, and Other Hazardous Materials

Section I
General

8–1. Introduction
This chapter sets policies and procedures for packaging and marking ammunition, explosives, and other hazardous materials.

8–2. Preparing and documenting
Requirements for packaging and marking ammunition, explosives, and other hazardous materials are developed per military and regulatory requirements and approved container specifications of the Department of Transportation (DOT) and international regulatory requirements, and are documented on engineering drawings, on packaging data sheets, or in specifications.

8–3. Preservation
Preservation of ammunition items or other hazardous materials complies with approved drawings, packaging data sheets, or specifications.

a. The packing of ammunition items and other hazardous materials (HAZMAT) complies with approved drawings and specifications or packaging data sheets,and, when applicable, certificates of equivalency.

b. In addition to the above, all hazardous materials that fall within the realm of performance-oriented packing must be tested and certified to meet international regulations. When a dangerous good is regulated to move within CONUS, it must be shipped per 49 CFR 100–180.

8–4. Marking
Markings for ammunition items and other hazardous materials will comply with MIL–STD–129, the item or general marking drawing, DOD and DOT regulations, and international regulatory requirements.

8–5. Packaging, shipping, and storing applications
Policy criteria in this pamphlet will be accomplished per this chapter, which complies with AR 700–15 and other pertinent regulations.

8–6. Safety and security measures
a. Procedures.

(1) Separate instructions—such as AR 385–11, AR 55–228, AR 385–64, TM 38–250, AR 700–141, 49 CFR 100–180, 29 CFR 1910, other applicable DOD and DOT regulations, and international regulatory requirements—are followed when shipping and storing ammunition, explosives, toxicants, or other dangerous goods.

(2) Appropriate steps must be taken to identify if a material safety data sheet (MSDS) is available by checking the Hazardous Materials Information Resource System (HMIRS). If a record is not found here, a hardcopy of the MSDS must accompany the shipment. If a record is found, no MSDS is required with the shipment.

(3) Weapons, vehicles (tanks, self-propelled artillery, armored personnel carriers, trucks, and other equipment) must be free of ammunition and explosive material. This also applies to salvaged ammunition components (projectiles, cartridge cases, and similar materials).

b. Functions.

(1) The shipper—

(a) Affixes a DD Form 2271 (Decontamination Tag) to each vehicle, weapon (except small arms), or other item of major equipment. The tag will be affixed in a conspicuous location that will preserve legibility and protect against deterioration and damage.

(b) Tags the containers used for shipping of small arms to show that contents have been inspected. An individual small arms weapon will not be tagged.

(c) Furnishes shipments of items that contain radioactive material with interior and exterior container warning labels prescribed by MIL–STD–129 and its references.

(d) Provides packaging for items packed for military air shipments that contain magnetized material with shielding, isolation, orientation, and labeling per TM 38–250.

(2) Both the shipper and the port of embarkation will certify that materiel has been inspected and that all ammunition, explosives, and hazardous materials have been removed. Provisions for certification are shown on DD Form 2271.

(3) Materiel in original packing that has not been exposed to possible sabotage by the enemy are exceptions to the

tagging requirements of this paragraph. This includes explosives, toxics, and ammunition specifically covered by DA directives.

Section II
Guided Missile and Large Rocket Systems

8–7. General
This section covers the preservation, packing, and marking of ammunition, explosives, and other hazardous materials for guided missile ammunition and large rockets, including their components. It also concerns materiel developed by the Aviation Missile Command. In addition to policies set by this section, uniform policies, procedures, and criteria are also based on requirement documents, such as required operational capability, letter requirement, and other user needs.

8–8. Developmental requirements
Packaging requirements for preserving, packing, and marking are developed using MIL–STD–2073–1 and container specifications of Department of Transportation regulations.

8–9. Packaging documentation
Packaging requirements are documented per paragraph 2–2.

8–10. Levels of protection
The level of protection for which requirements are set conforms to military levels of protection of AR 700–15.

a. In choosing levels of protection for guided missile ammunition, large rockets, and components, the highest level of protection is provided to ensure against hazards during shipment, handling, and storage.

b. The main considerations in choosing the right level of protection are environmental conditions and length of storage.

8–11. Preserving, packing, and marking
a. Preservation requirements for guided missile ammunition, large rockets, and components conform to MIL–STD–2073–1.

b. Packing of guided missile ammunition, large rockets, and components comply with the applicable packaging data.

c. Marking requirements for guided missile ammunition, large rockets, and components comply with MIL–STD–129. They will also comply with other regulatory marking requirements for specific hazards or modes of transportation (TM–38–250, DOD and DOT regulations, and other international regulatory requirements). Color-coding requirements conform to MIL–STD–709C and other criteria prescribed by the item manager.

Section III
Conventional, Chemical, and Nuclear Ammunition and Explosives

8–12. General
This section covers the preservation, packing, and marking of ammunition, explosives, and other hazardous materials that are developed by the U.S. Army Tank-automotive and Armaments Command. Included are conventional, chemical, and nuclear ammunition and their components. Excluded are guided missile ammunition, large rockets, and their components.

8–13. Development requirements
Requirements for preserving, packing, and marking will be developed per need and requirement documents and existing directives, including Federal and military specifications, container specifications, or DOT regulations and international regulatory requirements.

8–14. Packaging documentation
Packaging requirements will be documented per paragraph 2–2.

8–15. Levels of protection.
The level of protection will conform to the applicable military level, per AR 700–15. Include the user's documented requirements. Provide the highest level when selecting levels of protection for conventional, chemical, and nuclear ammunition and components. This ensures adequate protection against basic hazards during shipment, handling, and storage.

8–16. Packaging
The packaging and shipment of these items are strictly regulated. Specialized containers have been designated and tested for both rough handling and hazard classification and must be used. If packaging in accordance with approved

drawings is not available or is damaged, the shipper must consult with the appropriate design agency. Proper packaging methods can be determined by consulting the joint hazard classification system of other ammunition and explosive reference manuals. Marking shall be specified on the approved engineering drawings

8–17. Safety measures

Safety measures cited in paragraph 8–7 apply.

Chapter 9
Preparing Vehicles and Aircraft for Shipment

9–1. Preparing vehicles for shipment

The following requirements apply to shipments of vehicles and related equipment from CONUS supply sources (vendors and Army activities).

a. Maximum protection. Maximum protection is specified to protect vehicles during shipment, handling, and storage for more than 90 days from the date of processing. This level of protection is suitable for shipments to any destination. Periodic care of the equipment is required under the COSIS Program.

(1) Combat vehicles shall not be stored outside in excess of 90 days. Any outside storage over 90 days will require protective covers and extra preservation uniquely tailored to the storage conditions and length of storage. Sites shall contact the appropriate program management office for these instructions

(2) Engines and other components, other than those that must remain operable, will be processed per the applicable vehicle processing instruction.

b. Intermediate protection. Intermediate protection is specified to protect vehicles during shipment, handling, immediate use, or storage not to exceed 90 days from date of processing. Periodic care of the equipment while in storage is required under the COSIS Program. This level of protection is suitable for either domestic or overseas shipment (except for open deckloading aboard ship).

(1) Vehicle is closed, air vents are left open for recirculation, floor drains are opened and screens are installed to prevent insect infestation, and additional ventilation is installed to minimize condensation inside the vehicle. All openings that will permit free entry of water to the inside of the vehicle are sealted with tape.

(2) Drive-away capability is provided, when required.

c. Manufacturers domestic/export practice. Manufacturers standard commercial domestic or export procedures may be substituted for either maximum or intermediate requirements provided they are submitted to, evaluated, and approved by the packaging organization of the MSC as meeting or exceeding established preparation for shipment and storage requirements. Marking will reflect appropriate level.

d. Mounted equipment and components. Mounted equipment and components of vehicles and equipment, other than those that must remain operable, a provided a level of protection equal to that required for the vehicle. Adequate protection and security are provided for mounted equipment and components susceptible to loss or damage from pilferage, vandalism, vibration, or other conditions incidental to shipment.

e. Basic issue items. Basic issue items (BII) are preseserved, packaged, and packed to prevent damage and pilferage during shipment and storage. Guidance provided in MIL–STD–3003 is used.

f. Batteries. All batteries are activated and fully charged for all drive-on/drive-off equipment. Wet-charged batteries are removed and dry-charged batteries are packaged for long-term storage either in bulk or with the equipment, as appropriate. When stowed with the equipment, batteries are separate from but near the equipment, as appropriate. When stowed with the equipment, batteries are separate but near the BII.

g. Shipment in support of combat operations. Wheeled and tracked vehicles shipped in support of combat operations are given maximum protection. Specific levels of protection are applied as required by the requisitioner or as directed by the item manager, whose decision will be based on agreement between the shipper and the requisitioner or the major commander.

h. Air shipment of vehicles. Air shipment of vehicles is governed by carrier rules for that mode of shipment. MIL–HDBK–1791–(2) gives general requirements for air transport. Observe general precautionary measures that apply to shipping these items by air.

i. Shipments to arctic regions. Shipping activities ensure that any type of vehicular equipment shipped to arctic regions is winterized to withstand the mean ambient temperatures of the locale to which shipment is made. Winterization measures include, at the least, use of arctic lubricants and fluids, proper antifreeze protection, and other specific winterization measures required by the responsible MSC.

9–2. Preparing vehicles for overseas shipment

The requirements specified below apply to shipments of vehicles and related equipment from CONUS supply sources (vendors and Army activities) to overseas requisitioners.

a. Levels of protection. Wheeled and tracked vehicles are provided the levels of protection specified in AR 700–15.

(1) Vehicles to be stored are given the level of protection required for planned storage conditions (for example, short-term open and covered storage, intermediate; long-term open and covered storage, maximum).

(2) Vehicles are never be stowed on a deck of a ship. If circumstances necessate stowage on the deck of a ship, contact the source of supply to obtain approval and for special preservation instructions.

b. Security assistance shipments. Maximum preservation is provided for all vehicles shipped to security assistance customers, except when a lower level is—

(1) Requested by the receiving country and supply support arrangements.

(2) Recommended by the responsible Military Assistance Advisory Group, security assistance office, or implementing service.

c. Responsibilities for preparing vehicles for overseas shipment. CONUS shipping activities—

(1) Process vehicles per applicable procedures, as referenced in the packaging segment of FEDLOG, and with exterior dimensions reduced per TB 55–46–1.

(2) Replace or repair, upon request of the commander of a terminal, any vehicle damaged in transit that requires repair beyond the abilities of the terminal.

(3) Advise the Military Traffic Management Command of the level of protection that has been given the vehicles. This will be a coded entry in the outsize specification card of the Export Traffic Release Request.

d. MTMC CONUS terminal responsibilities for preparing vehicles for overseas shipment. MTMC CONUS terminal personnel—

(1) Preserve vehicles received for overseas shipment at the required level of protection (AR 700–15) and per approved instructions of the packaging segment of FEDLOG. An exception is when shipping instructions specify that the vehicles are to remain drivable for ease of loading and offloading.

(2) Determine if damage to the vehicles has occurred in transit. Make repairs within the capability of the terminal.

(3) Remove vehicles to designated repair facilities as instructed by the applicable MSC when vehicles are damaged beyond the repair capability of local terminal shops.

(4) Provide extensive supplemental protection for any vehicle authorized for open deck loading. Detailed preservation instructions should be obtained from the design engineering command or program manager. The entire vehicle shall be coated with a preservative and the vehicle completely encapsulated in a barrier film. Additionally, as a minimum, MtMC CONUS terminal personnel—

(a) Secure doors to prevent accidental opening.

(b) Seal openings in closed cabs, vans, and other closed-type bodies with tape.

(c) Cover radiator grilles, windows, and fixed flat windshields with exterior grade plywood paneling of a minimum 3/8-in, 3-ply, secured with metal strapping.

(d) Secure fold-down windshields in the folded-down position and provide a cover constructed per MIL–STD–3003.

e. Shipments in support of overseas movement of troops. Unit commanders ensure that unit vehicles are prepared for overseas movement per AR 220–10. The provisions herein do not change the responsibilities of the MTMC ocean terminals as specified in AR 220–10.

9–3. Preparing vehicles for shipment to CONUS requisitioners

a. Unless special requirements are provided by the requisitioner, all shipments to CONUS using units, as indicated by the address, will be considered for immediate use and processed for shipment, intermediate protection, driveable (self-propelled) and towable (towed) vehicles. All fluids and lubricants should be at operating level and enough fuel in the fuel tanks of self-propelled vehicles to permit off-loading and movement of 10 miles at the receiving point. Unit commanders will be responsible for sustaining vehicles prepositioned but not issued.

b. The following apply to preparing vehicles for shipment to CONUS storage facilities:

(1) *New vehicles.* MSCs ensure that vehicles are processed prior to shipment based on known or projected storage times and location. Unique requirements are coordinated with Army activities for temporary storage of vehicles that will encompass reduced levels of exercising, inspection, and deterioration prevention procedures.

(2) *Vehicle turn-ins.* Unit commanders ensure that all preventive maintenance requirements have been performed and that vehicles are processed to prevent any deterioration. Upon receipt from units, storage activities process the vehicles per applicable vehicle preservation requirements based on known or anticipated storage times and location.

(3) *Retrofit, overhaul vehicles.* Retrofitted or overhauled vehicles are processed per requirements established in the maintenance work directive. MSC packaging organizations provide appropriate preservation requirements to the DMWR.

9–4. Preparing aircraft for shipment and storage

Aircraft for shipment are prepared per applicable preparation for shipment technical manual.

a. Preservation. Preservation requirements for aircraft are determined by the mode of shipment and the period of time the aircraft will remain inactive.

(1) Preservation instructions contained in the applicable preparation for shipment manual normally provide protection for up to 45 days.

(2) When the aircraft will remain inactive for more than 45 days, or when it will be shipped by truck or on a weather deck of a vessel, it is preserved for intermediate storage per applicable aircraft unit and intermediate maintenance manual.

b. Storage. The types of storage applicable to aircraft are defined in TM 55-1500-204-25/1. Specific requirements are provided in the applicable aircraft unit and intermediate maintenance manual.

(1) Flyable storage maintains the aircraft in operable condition. There is no time limit for flyable storage; however, flyable storage requires periodic inspection and ground run of the aircraft.

(2) Short-term storage procedures preserve aircraft for up to 45 days. These procedures require extensive preservation, but the requirement is eliminated for periodic runups.

(3) Intermediate storage procedures preserve aircraft for a period of 46 to 180 days. These procedures require very extensive preservation of the aircraft. Intermediate storage is the longest term of storage applicable to aircraft. At the end of a 180-day period, the aircraft must be depreserved, have all required maintenance operations performed, be operated, and returned to flyable status. If further storage is required, it may then be represerved for storage.

Chapter 10
Special Shipments

10–1. General

Preservation and packing for shipment of items requiring special or unique considerations conform to AR 700–15 and this pamphlet.

a. Shipments to Defense Reutilization and Marketing Office are not required to be packaged to a specified level of protection.

b. Reusable containers that are part of the item accompany the item unless otherwise directed by the item manager. Challenges should be directed to the item manager.

c. Items should be properly identified.

d. Items are palletized, if required, to facilitate handing.

10–2. Electro-static discharge sensitive items

Electro-static discharge (ESD) sensitive items protective workstations (or field service kits) are utilized in all areas where ESD sensitive items are handled and packaged. ESD sensitive items are protected at all maintenance and supply levels. Personnel are trained in the proper packaging and handling of ESD sensitive items. ESD sensitive items are prepared per MIL–HDBK–773(1).

10–3. Security of sensitive items

a. Shipments of sensitive items should comply with AR 190–11. Sensitive items include those items shown in AR 740–26.

b. The requirement for overpacking of sensitive item shipments to achieve a specified minimum weight per shipment unit (AR 190–11), for security reasons, is not excessive packaging per this pamphlet. Such overpacking will be done on an individual case basis in the absence of required cargo containers.

10–4. Direct vendor delivery shipments

a. Commercial packaging is applied to direct vendor delivery shipments that will be consumed at initial destination.

b. A military level of protection may be required by the item manager for specific items, depending on the logistics environment or anticipated time of storage.

10–5. Security assistance and foreign military sales

a. Item managers ensure that the correct levels of protection are specified per the sales agreement with a foreign government.

b. If the sales agreement does not specify a specific level of packaging, packaging is military preservation and level A pack.

c. Marking is in accordance with MIL–STD–129. Special markings are applied if identified in the sales agreement.

10–6. APS shipments and shipments in support of deployments

a. Shipments of nonself-propelled equipment will be packaged in accordance with MIL–STD–2073–1.

b. When the total shipment weight is less than 25 pounds and the total shipment cube is less than 1 cubic foot, then a level B pack can be specified.

c. Self-propelled equipment can be prepared for shipment to allow it to be drivable except when—

(1) It was weatherdeck loaded for shipment.

(2) Specifically requested by the site or theater commander.

10–7. OCONUS shipments containing solid wood packing materials

a. This requirement applies to the packing of all classes of supply. This requirement is applicable to Army logistics activities, to include installation Government-owned/contractor-operated operations. Solid wood packing materials (SWPM) is defined as wood pallets, skids, boxes, crates, reels, and wooden material that have not been satisfactorily processed to kill pests present in the raw wood. All SWPM must be treated in one of the approved methods in paragraph 10–7c(7).

b. The European Union (EU) issued an emergency decision to regulate coniferous, soft wood, NMWPM from being shipped into Europe to prevent the introduction of the pinewood nematode. This decision became effective on 1 October 2001 and affects all shipments either initiated or enroute after that date. The United Nations (UN) International Plant Protection Convention enacted measures that will have similar effects on all international shipments, to include hardwoods. This UN standard is expected to be released in spring 2002 and to become effective 1 April 2003. This requirement will serve to ensure that both the EU and UN International Plant Protection Convention measures are met.

c. This section addresses seven areas: new procurement of wood and wood products; packaging of existing stock; criteria for selection of stock; inspection and marking of existing stock; DOD self-certification; Army prepositioned stock; and available training.

(1) *Procurement of wood and wood products*. The following statements should be used as standard contract language. Supplements are authorized to meet special needs.

(a) All contracts for the purchase of bulk lumber that will be used for the purpose of packaging will be modified as follows: "Nonmanufactured soft and hard wood material identified as intended for use in the construction of wooden pallets, wood containers, blocking and bracing shall be heat treated to a core temperature of 56 degrees centigrade for 30 minutes; certified; and marked by an accredited agency recognized by the American Lumber Standards Committee (ALSC) in accordance with the Nonmanufactured Wood Packing Policy and the Nonmanufactured Wood Packing Enforcement Regulations, both dated 9 November 2001."

(b) Contracts that require materiel to be packaged from the manufacturer will be modified as follows: "All wooden pallets, container interior blocking and bracing, and wood containers produced entirely, or in part of nonmanufactured wood species shall be constructed of wood heat treated to a core temperature of 56 degrees centigrade for 30 minutes; certified; and marked accordingly by an accredited agency recognized by the American Lumber Standards Committee (ALSC) in accordance with the Nonmanufactured Wood Packing Policy and the Nonmanufactured Wood Packing Enforcement Regulations, both dated 9 November 2001."

(2) *Packaging of existing stock.*

(a) All packaging operations will use HT lumber.

(b) There will not be a total repack of existing stock. Installations will repack, as necessary, OCONUS shipments, incident to shipment.

(c) Use of approved alternative nonwood products, such as plastic, high-density polyethylene, composite, pallets, skids, and box/crates, is authorized; however, only the procuring command's packaging engineering or similarly designated personnel are authorized to change item packing requirements, keeping in mind hazardous classification, insensitive munitions characteristics, and other issues affected by changing packaging.

(d) Repairs to SWPM and pallets, skids, and boxes/crates made from SWPMs will be made with ALSC-certified heat-treated wood. The repaired product will be appropriately marked as pest free once inspection criteria in paragraph 10–7c(4) are applied.

(3) *Criteria for selecting stock.*

(a) Whenever practical, installations will use present inventory for shipments to other than OCONUS countries.

(b) Army activities directing shipments, when possible, direct OCONUS shipments from the Defense Logistics Agency distribution depot's stock.

(c) Military installations can be DOD self-certifiers for shipments of SWPM to OCONUS destinations. The installation must meet the requirements identified in paragraphs 10–7c(4) and 10–7c(5). If an installation chooses not to be DOD site-certified, an ALSC accredited agency is contracted to ensure that the installation wood packing is complying to EU and International Plant Protection Convention standards.

(d) If criteria in paragraphs 10–7c(4) and 10–7c(5) cannot be met, installations not using heat-treated pallets and containers should forward EU-directed shipments to the Defense Logistics Agency distribution depots, the Defense Distribution Depot, Susquehanna, PA, or the Defense Distribution Depot, San Joaquin, CA, for repacking in certified SWPM products and forwarding. Owners of the shipment will be responsible for transportation and repacking costs.

(4) *Inspection and marking of CONUS and OCONUS existing stock and DOD site certification.*

(a) All SWPM less than 5 years old, as identified by the date of pack, is inspected prior to shipment to ensure there are no worm holes greater than 3 mm; bark is not present; and the moisture content is 19 percent or less when tested with a moisture meter. If the wood products and packaging materials are over 5 years old, it is inspected for

wormholes, presence of bark, termites, and other insects. Moisture content does not have to be verified for wood over 5 years old.

(b) If the SWPM meets these inspection criteria, it will be marked (stenciled or stamped) "USA DOD Certified Pest Free," followed by the packaging activity or shipper's Department of Defense address activity codes (DODAAC)(see figure 10–1).

(c) If any of the above criteria cannot be met, the item is repacked in compliant wood or treated in one of the three approved methods identified in paragraph 10–7*c*(8).

1. If an item requires repacking, compliant wood is used. SWPM (pallets, blocking, bracing, reels, boxes, crates, and so on) manufactured at a certified Army installation utilizing hat-treated compliant lumber is marked "USA DOD Certified Pest Free," followed by the constructing activity's DODAAC if the installation is not ALSC certified. Contracting out installation wooden packaging requirements is authorized. If contracting this service for OCONUS shipments, it is with an ALSC-certified agency. The most cost-effective means is used and is determined at the installation level.

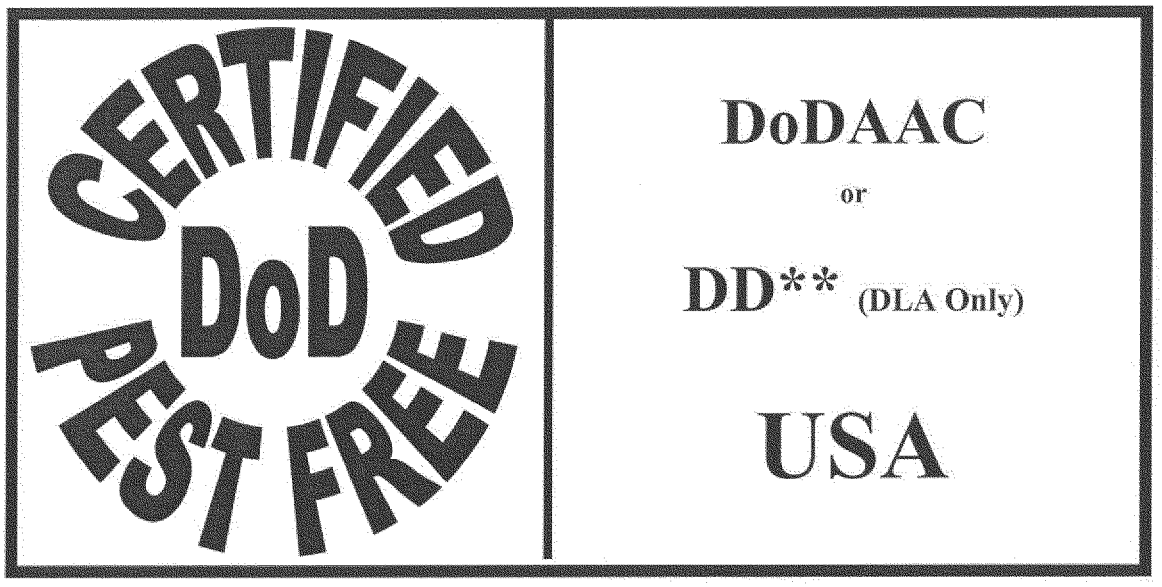

Figure 10–1. "USDA DOD certified pest free" stamp

2. If wood is heat treated, the wood is marked "USA DOD certified pest free," followed by the packaging activity or shipper's DODAAC or Commercial and Government Entity codes.

(d) Repacking of materiel in noncompliant SWPM, as a result of NICP directed care-of-supplies-in-storage (COSIS), in noncompliant SWPM, shall be fabricated using ALSC certified heat-treated wood.

(e) Minimum container markings identified above must be readable and are placed on the identification side(s) of the container in capital letters of equal height and proportionate in size to the other markings. Containers 10 cubic feet and over are marked on the end of the container, to the left of the identification markings. Color will be the same as that used for the identification markings. Any opaque, nonfading, fast-drying, weather-resistant stencil ink, lacquer, paint, enamel, or branding can be used. Pallets are marked on one stringer. Multiple markings on additional pallet stringers or corner blocks of a post pallet, end posts, or box and crate side panels are permitted and encouraged.

(f) One or two marking boards are permitted for pallets and skids containing multiple wood boxes where certification markings are not visible.

(5) *An effective audit trail is required at each installation upon utilization of heat-treated SWPM.* Each installation

will appoint a primary and alternate focal point for all actions related to the use of SWPM. The following are the minimum data requirements for tracking DD compliance with the EU emergency measures:

(a) New construction of wooden containers/pallets/skids.

1. Purchase order/requisition/receipt and quantity of HT lumber purchased.

2. Board feet of heat-treated lumber consumed.

(b) Existing packaged materiel certified pest free for EU shipments.

1. National stock number

2. Quantity shipped

3. Transportation control number

4. Tested moisture content percentage

5. Pack and ship date

(c) Recorded data must be maintained for a minimum of 2 years and be available for review upon request. DOD site certified installations record, report, and maintain documentation in accordance with para 10–7*c*(8). Installations utilizing an ALSC-accredited agency will adhere to their requirements for manual files.

(6) *APS.*

(a) During routine maintenance cycles of APS vessels, inspection, repacking, and certification as identified in paragraph 10–4 are accomplished.

(b) APS materiel currently prepositioned OCONUS does not require inspection or repack if it remains in country.

(c) Depots storing CONUS-based APS materiel and operational projects shall ensure that this materiel is compliant. NICPs are responsible for funding repacking.

(7) *The preferred, approved method for treating SWPM is heat.* Because of environmental considerations, fumigation and chemical pressure impregnation should be used only if heat treatment is not possible.

(a) The only universally accepted fumigant is methyl bromide, which is outlawed in California. It is becoming more expensive to purchase and difficult to get EPA approval for its use. EPA may completely ban methyl bromide altogether in the near future.

(b) Chemical pressure impregnation is not a universally accepted process and requires specific bilateral agreements between suppliers and the receiving countries. It can leave varying amounts of chemical in the finished wood that are toxic, especially when used pallets and boxes are burned for heating and cooking in the field.

(c) Sites utilizing fumigation or chemical pressure impregnation wood treatment shall review their state and U.S. Environmental Protection Agency regulatory documents before use. The most stringent requirements will be followed, and the sites must ensure this method is acceptable to the destination country; otherwise they must use heat-treated wood.

(8) *A DOD individual certification training program developed by the Navy is available on www.icptarp.net/tarp/nmwp.nsf/main?openpage.* Individuals who record data, manufacture/repair, mark, and inspect SWPM are required to complete this training and records of course completion must be maintained for audit purposes. Training is for military, Government civilian employees, and contractors working at Government-owned, contractor-operated facilities.

Chapter 11
Army Packaging Policy Work Group

11–1. Army Packaging Policy Work Group objectives

a. Army Packaging Policy Work Group (APPWG) is a permanent forum established to develop and recommend changes to policy, guidance, and standardization of packaging throughout the Army as it relates to the overall Federal and DOD distribution system. The APPWG also provides a forum where items of interest to the Army packaging community can be disseminated and discussed on a periodically. Special areas of interest include—

b. New and/or improved packaging equipment, methods, and concepts technology.

c. Engineering and data development.

d. Training.

e. Increased productivity and overall cost improvement and effectiveness.

f. International and domestic packaging and transportation requirements/changes.

g. Environmental issues/mandates.

h. Automated systems for processing packaging data.

i. Special Army projects affecting the DOD distribution system.

j. DOD acquisition initiative issues.

k. Industry standardization organizations, committees, and documents.

l. Packaging career issues and regeneration of the Army packaging workplace.

m. Special areas of interest will be added and deleted at the discretion of, HQDA DCS, G–4.

11–2. APPWG functions

a. APPWG is responsible for the tasks in paragraphs 11–3 and 11–4 and for initiating issues and resolving differences. Specific membership is recommended by AMC, LOGSA PSCC, and the Deputy Chair, using selection criteria developed by the APPWG and approved by HQDA DCS, G–4. In the absence of the Chair, the Deputy Chair will assume this duty. Advisory members will participate in every capacity as a primary member, with the exception of voting (see para 11–4*g*).

b. The APPWG comprises the following representatives:

(1) HQDA DCS, G–4—

(a) Serves as chair.

(b) Approves meeting site and agenda.

(c) Directs MACOMs and AMC MSCs participation.

(d) Assigns projects and suspense.

(e) Approves/disapproves work group recommendations.

(f) Initiates coordination with other services/agencies, as applicable.

(2) AMC, LOGSA PSCC—

(a) Serves as Deputy Chair for the Chair, or Chair in the absence of the HQDA DCS, G–4, representative.

(b) Coordinates meeting dates and arranges for facilities through host activity.

(c) Notifies members of the meeting and requests agenda topics.

(d) Prepares agenda, meeting minutes, and correspondence for HQDA DCS, G–4, approval.

(e) Serves as the coordinator and point of contact for all activities of the APPWG and task groups and provides, to HQDA DCS, G–4, status on all directed actions.

(f) Obtains packaging information from industry trade shows, periodicals, and other sources and distributes all information obtained to the packaging community.

(g) Reviews test reports concerning research and development in the field of packaging.

(h) Serves as the Army representative to the Office of the Secretary of Defense chaired Defense Packaging Policy Group.

(i) Maintains and distributes a current list of APPWG members, phone numbers, addresses, and email addresses (see figure 11–1).

Headquarters, DA
ATTN: DALO-SMP
Deputy Chief of Staff, G-4
500 Army Pentagon
Washington, DC 20310-0600

Training and Doctrine Command
ATTN: ATBO-HL, 5A North Gate Road
2d Floor, RM 204
Fort Monroe, VA 23651-1048

U.S. Army Forces Command
Deputy Chief of Staff for Logistics
ATTN: AFLG-SMS
1777 Hardee Avenue, SW
Fort McPherson, GA 30330-1062

U.S. Army Pacific Command
Deputy Chief of Staff for Logistics
ATTN: APLG-MMS,
Fort Shafter, HI 96858

U.S. Army Reserve Command,
ATTN: FRC-LG, 1400 Deshler Street, SW , Fort McPherson, GA 30330-2000

Commander, U.S. Army South
ATTN: SOLG
Deputy Chief of Staff for Logistics
Building 1304,
Fort Buchannan, PR 009349

Eighth U.S. Army
ATTN: AEGD-P-S
APO AP 96205-0009

U.S. Army Europe and Seventh Army ATTN: AEAGD-SD
ODSCSLOG, Supply Division
Heidelberg, Germany, APO AE 09014

U.S. Army Materiel Command
ATTN: AMCLG-LSA
5001 Eisenhower Avenue
Alexandria, VA 22333-0001

U.S. Army Operations Support Command
ATTN: AMSOS-SNT
1 Rock Island
Arsenal, Rock Island, IL 61299-6000

U.S. Army Soldier and Biological Chemical Command
Edgewood Chemical Biological Center
ATTN: Packaging Team/AMSSB-REN-SE-PK
5183 Blackhawk Road, Building E3331
Aberdeen Proving Ground, MD 21010-5424

U.S. Army Soldier and Biological Chemical Command, Logistics Support Team
Integrated Materiel Management Center
ATTN: AMSSB-RIM-L(N)
15 Kansas St.
Natick, MA 01760-5052

USAMC LOGSA, ATTN: AMXLS-MLA Building 5307
Redstone Arsenal, AL 35898

National Guard Readiness Center
ATTN: NGB-ARL-M
11 S. George Mason Drive
Arlington, VA 22204-1382

U.S. Army tank-Automotive and Armaments Command
ATTN: AMSTA-TR-E/PKG, MS267
Warren, MI 48397-5000

U.S. Army Aviation and Missile Command,
ATTN: AMSAM-MMC-MM-DP
Redstone Arsenal, AL 35898-5000

U.S. Army Communication-Electronics Command
ATTN: AMSEL-LC-LEO-E-ET-3
Fort Monmouth, NJ 07703-5000

U.S. Army Tank-automotive and Armaments Command-ARDEC
ATTN: AMSTA-AR-WEP, B 455
Picatinny Arsenal, NJ 07806-5000

Dean
School of Military Packaging Technology
ATTN: ATSL-MP
360 Lanyard Road
Aberdeen Proving Ground, MD 21005-5282

Figure 11–1. APPWG members

c. APPWG members—

(1) Appoint a command representative and alternate.

(2) Serve as an advisory staff for the Army on matters related to packaging.

(3) Provide agenda topics and discussion papers for meetings.

(4) Participate at APPWG meetings.

(5) Provide a channel for the interchange of information on packaging problems and information.

(6) Coordinate with the Deputy Chair prior to local test evaluations on packaging or packaging related materials, equipment, or processes.

(7) Complete special studies, surveys, and provide recommendations on all HQDA DCS, G–4, directed actions.

(8) Possess a thorough knowledge of packaging as it pertains to that individual's command.

(9) Inform the Deputy Chair of changes to command representative and/or alternates.

d. Advisory members—

(1) Provide technical or administrative support to ongoing or unique APPWG projects.

(2) Attend meetings or participates in studies, as required.

11–3. Functions

a. APPWG members provide and exchange information and develop, coordinate, and recommend packaging policy to the HQDA DCS, G–4; work together to detect and recommend solutions to systemic and Army packaging policy problems; and promote the standardization of packaging within the Army and DOD. Consideration will be given to individual MACOM or organization unique requirements.

b. APPWG provides a forum to advise the U.S. Army Training and Doctrine Command on the development and improvement of training pertaining to packaging and recommend that their programs respond to Army needs.

c. APPWG establishes working groups, as required, to improve operational packaging techniques; to study and resolve specific packaging policy and issues common to more than one MACOM or the Army; and to promote standardization.

11–4. Procedures

a. Organization. APPWG is chaired by HQDA DCS, G–4, AMC (LOGSA PSCC) serves as the Deputy Chair. The Deputy Chair functions as the Chair in the absence of the HQDA DCS, G–4. MACOM and AMC MSC representatives will make up the APPWG membership.

b. Meetings. APPWG meets annually or at the call of the Chair, who approves the dates and locations of meetings. The Deputy Chair notifies APPWG membership/invited activities and requests proposed agenda topics at least 90 days before the meeting date. APPWG member organizations not able to provide a representative notify the Deputy Chair in writing. Commands failing to attend constitute agreement with majority vote.

c. Agenda. Members provide proposed agenda topics with information papers, to the Deputy Chair 45 days before the meeting. The Deputy Chair coordinates the agenda with the Chair and distributes the final agenda at least 30 days prior to the meeting.

d. Minutes. The Deputy Chair prepares the meeting minutes and submits them to the Chair within 15 working days after each meeting for approval, and disseminates copies to members within 5 working days after approval by the Chair.

e. Annual report of accomplishments. The Deputy Chair submits a coordinated report of accomplishments to the Chair for approval and distribution to the APPWG members once each year.

f. Funding. Funds for travel and participation in APPWG activities are provided by the member's parent organization.

g. Decisionmaking process. The APPWG is a decisionmaking work group that recommends packaging policy to the HQDA DCS, G–4. Policy recommendations are determined by consensus. When consensus of members cannot be reached, the issue is resolved by one vote per member, with the majority opinion prevailing. Specific procedures include:

(1) Discusing the issue in need of consensus.

(2) All members (Primary and Advisory) providing input and/or requesting more information.

(3) Discussing alternatives (Primary and Advisory members).

(4) Determining if consensus can be reached (all members can support the decision).

(5) If consensus cannot be reached, identifing points of conflict and agreement and attempting to negotiate a solution.

(6) If consensus still cannot be reached by all members (primary and advisory), making a decision by a majority vote of the primary members.

(7) Providing to the Chair, in writing, detailed rebuttals concerning majority approved issues no later than 45 days after publication of the meeting minutes, for timely review and decision. Rebuttals must be fully substantiated to support opposing positions.

h. Communication. APPWG members may communicate directly with the HQDA DCS, G–4, Chair.

i. Guests. Members are responsible for the invitation of their respective service/agency guests. In order to maintain the effectiveness of the APPWG, guests should be limited to those who can contribute significantly to the established agenda. Guest attendance is subject to approval by the Chair, or the Deputy Chair in the absence of the Chair.

11–5. Army packaging awards

a. The Army participates in the DOD Packaging Awards as identified in DOD 4140.1. The APPWG is the forum to announce, solicit, and evaluate Army candidates for these awards.

b. The Army candidates selected to compete for the DOD awards will be recognized by HQDA at the annual APPWG meeting.

Appendix A
References

Section I
Required Publications
This section contains no entries.

Section II
Related Publications
A related publication is a course of additional information. The user does not have to read a related reference to understand this publication.

AR 25–30
The Army Integrated Publishing and Printing Program

AR 25–51
Official Mail and Distribution Management

AR 55–228
Transportation by Water of Explosives and Hazardous Cargo

AR 190–11
Physical Security of Arms, Ammunition and Explosives

AR 220–10
Preparation for Overseas Movement of Units (POM)

AR 385–11
Ionizing Radiation Protection (Licensing, Control, Transportation, Disposal, and Radiation Safety)

AR 385–64
Ammunition and Explosive Safety Standards

AR 672–20
Incentive Awards

AR 700–141
Hazardous Materials Information System (HMIS) (RCS DD–FM & P(A, Q, & AR) 1486)

AR 700–15
Packaging of Materiel

AR 708–1
Logistics Management Data and Cataloging of Supplies and Equipment

AR 725–50
Requisitioning, Receipt, and Issue System

AR 735–11–2
Reporting of Supply Discrepancies

AR 740–3
Stock Readiness

AR 740–26
Physical Inventory Control

DA Pam 351–4
U.S. Army Formal Schools Catalog

DA PAM 708–2
Cataloging and Supply Management Data Procedures for the Army Central Logistics Data Bank

DA PAM 738–750
Functional Users Manual for The Army maintenance Management System (TAMMS)

AMC–R–735–5
Processing Reports of Discrepancy at AMC Accountable Supply Distribution Activities and Depots

DOD Joint Pub 1–02
DOD Dictionary of Military and Associated Terms

DODD 4140.1
Materiel Management Policy. (Available at www.dtic.mil/whs/directives.)

DODD 4500.9
Part II, Cargo Movement. (Available at http://public.transcom.mil/J4/j4lt/dtr.html.)

DODD 5010.16
Defense Management Education and Training Program. (Available at www.dtic.mil/whs/directives.)

MIL–DTL–4M
Tires and Inner Tubes (Non-Aircraft); Packaging of

MIL–HDBK–773(1)
Electrostatic Discharge Protective Packaging. (Available at www-library.itsi.disa.mil.)

MIL–HDBK–774
Palletized Unit Loads. (Available at www-library.itsi.disa.mil.)

MIL–HDBK–1791(2)
Designing for Internal Aerial Delivery in Fixed Wing Aircraft. (Available at www-library.itsi.disa.mil.)

MIL–STD–129
Military Marking for Shipment and Storage. (Available at www-library.itsi.disa.mil.)

MIL–STD–709C
Ammunition Color Coding. (Available at www-library.itsi.disa.mil.)

MIL–STD–961D(1)
Defense Specifications. (Available at www-library.itsi.disa.mil.)

MIL–STD–962C
Defense Standards and Handbooks. (Available at www-library.itsi.disa.mil.)

MIL–STD–2073–1
Standard Practice for Military Packaging. (Available at www-library.itsi.disa.mil.)

MIL–STD–3003
Vehicles, Wheeled: Preparation For Shipment and Storage of. (Available at www-library.itsi.disa.mil.)

TB 55–46–1
Equipment Characteristics (Dimensions, Weight, Cube) for Transportability of Military Vehicles and Other Outside/ Overweight Equipment

TM 38–250
Preparing Hazardous Materials for Military Air Shipments. (Available at www.logsa.army.mil/etms/online.htm.)

TM 38–470
Storage and Maintenance of Army Prepositioned Stock Material. (Available at www.logsa.army.mil/etms/online.htm.)

TM 55–1500–204–25/1
General Aircraft Maintenance Practices. (Available at www.logsa.army.mil/etms/online.htm.)

A–A–3174
Plastic Sheet, Polyolefin. (Available at Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402–0001.)

AAP–15
NATO Glossary of Abbreviations Used in NATO Documents and Publications. (Available at www.nato.int/docu/standard.htm#AAP.)

AFJ Man 24–204
Preparing Hazardous Materials for Military Air Shipments. (Available at www.e-publishing.af.mil.)

ASTM D–1974
Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes. (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

ASTM D–3950.
Standard Specification for Strapping, Nonmetallic (and Joining Methods). (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

ASTM D–3951
Standard Practice for Commercial Practice. (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

ASTM D–3953
Standard Specification for Strapping, Flat Steel and Seals. (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

ASTM D–4169
Standard Practice for Performance Testing of Shipping Containers and Systems, E1–2000. (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

ASTM D–4675
Standard Practice for Selection and Use of Flat Strapping Materials. (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

ASTM D–5118/D 5118M
Standard Practice for Fabrication of Fiberboard Shipping Boxes. (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

ASTM D–5458
Standard Test Method for Peel Cling of Stretch Wrap Film (Revised 2001). (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

ASTM D–5459
Standard Test Method for Machine Direction Elastic Recovery and permanent Deformation and Stress Retention of Stretch Wrap Film (Revised 2001). (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

ASTM D–5486
Standard Specification for Pressure-Sensitive Tape for Packaging, Box Closure and Sealing. (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

ASTM D–5749
Standard Specification for Reinforced and Plain Gummed Tape for Sealing and Securing. (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

29 CFR 1910
Occupational Safety and Health Administration, Department of Labor. (Available at www.access.gpo.gov/nara/cfr/index.html.)

49 CFR 100–180
Research and Special Programs Administration, Department of Transportation. Available at www.access.gpo.gov/nara/cfr/index.html.)

DMM Issue 57
Domestic Mail Manual (DMM). (Available at http://pe.usps.gov.)

HMIRS
Hazardous Materials Information Resource System. (Available at www.dlis.dla.mil/hmirs.)

MH1b–2000
Wood Pallets for Military Use. (Available at www.dscp.dla.mil/subs/subsbo/tdp/tdthre.pdf.)

PPP–B–1672
Boxes, Shipping, Fiberboard. (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

SAE–AMS–T–22085
Tapes, Pressure-Sensitive, Adhesive, Preservation and Sealing Preparation of Freight for Air Shipment. (Available from Military Specifications and Standards, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111–5904.)

Section III
Prescribed Forms
This section contains no entries.

Section IV
Referenced Forms
Except where otherwise indicated, the following forms are available as follows: DA forms are available on the Army Electronic Library CD–ROM (EM 0001) and the USAPA Web site (www.usapa.army.mil); DD forms are available at www.dior.whs.mil; and SF forms are available through normal supply channels.

DA Form 2258
Depreservation Guide for Vehicles and Equipment

DD Form 1225
Storage Quality Control Program

DD Form 1348–1A
Issue Release/Receipt Document

DD Form 1426
Standardization Document Improvement Proposal

DD Form 2169
Special Packing Instruction

DD Form 2169C
Special Packing Instruction (Continuation Sheet)

DD Form 2271
Decontamination Tag

SF 361
Discrepancy in Shipment Report

SF 364
Supply Discrepancy Report (SDR). (Available at http://contacts.gsa.gov/webforms.nsf.)

SF 368
Productivity Quality Deficiency Report (PQDR)

PS Form 3811
Domestic Return Receipt. (Available at http://usps.com/forms. Use search; form not printable.)

Glossary

Section I
Abbreviations

ALSC
American Lumber Standards Committee

AMC
Army Materiel Command

CDRL
contract data requirements list

COSIS
care of supplies in storage

DA
Department of the Army

DOD
Department of Defense

DODAAC
Department of Defense address activity codes

ESD
electro-static discharge

EU
European Union

FEDLOG
Federal Logistics

HQ
Headquarters

MACOM
Major Command

MRO
Materiel Release Order

MTMC
Military Traffic Management Command

NICP
National Inventory Control Point

Pam
pamphlet

PSCC
packaging, storage, and containerization center

SPI
special packing instructions

TB
Technical Bulletin

Section II
Terms

Federal Logistics Database (FEDLOG).
FEDLOG is a logistics information system that allows retrieval of information from the Federal Logistics Information System (FLIS) and service specific databases (see http://www.dlis.dla.mil/FedLog).

Federal Logistics Information Sysem (FLIS).
FLIS is a logistics data base of over six million active and six million inactive items of supply providing information for the military services, civilian agencies, contractors, NATO countries, and other friendly foreign governments. FLIS contains information about manufacturers, item characteristics, item logistics, management, transportation, packaging, and use for specific items. DLIS–E collects, stores, processes, sorts, and distributes data to provide information products and services to thousands of customers worldwide (see www.dtic.mil/whs/directives/corres/pub1.html).

Section III
Special Abbreviations and Terms
This publication uses the following abbreviations, brevity codes, and acronyms not contained in AR 310–50.

AMDF
Army materiel data file

APPWG
Army Packaging Policy Work Group

APS
Army prepositioned stock

BII
basic issues items

CONUS
continental United States

HAZMAT
Hazardous Materiel

in
inch

LOGSA
logistics support activity

LOP
level of protection

mm
millimeter

MSC
Major Subordinate Command

MSDS
material safety data sheet

NA
not available

NATO
North Atlantic Treaty Organization

OCONUS
outside continental United States

SMPT
School of Military Packaging Technology

SWPM
soft wood packing material

TM
Technical Manual

UN
United Nations

USPS
United States Postal Service

USAPD

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